

### **AMENDMENTS TO THE DRAWINGS**

Please replace drawing sheets 12/15 – 15/15 with the attached replacement sheets 12/15 – 15/15, each of which is labeled as “Replacement Sheet.” Drawing sheet 12/15 includes FIG. 13, which has been labeled as “Prior Art.” Drawing sheet 13/15 includes FIG. 14, which has been labeled as “Prior Art.” Drawing sheet 14/15 includes FIG. 15, which has been labeled as “Prior Art.” Drawing sheet 15/15 includes FIG. 16, which has been labeled as “Prior Art.”

### REMARKS/ARGUMENTS

Applicants would like to thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office Action, and amended as necessary to more clearly and particularly describe the subject matter that Applicants regard as the invention.

Claims 13, 15 and 24 have been amended.

The Examiner required that Figures 13-16 be labeled as "Prior Art." The figures have been amended accordingly.

The Examiner required an amendment to the title of the invention, to clearly indicate the invention to which the claims are directed. The title has been amended accordingly.

Claim 13 was objected to for an informality, which has been corrected.

Claims 13, 14, 16-22 and 24 were rejected under 35 U.S.C. 103(a) as being unpatentable over Persson in view of McCune. Claim 13 recites:

"a phase-modulated signal producer, having an input and producing a phase-modulated signal from a signal corresponding to the phase and provided at the input;

an amplitude-modulation amplifier, having another input and amplitude-modulating the phase-modulated signal by the amplitude signal, which is provided at said another input, and the phase-modulated signal to produce a transmitting modulated signal;

an amplitude/phase detector, detecting the signal corresponding to the phase that is provided at said input and the amplitude signal that is provided at said another input;"

In discussing the claimed amplitude/phase detector, the Examiner cites Persson's delay controllers 9 for teaching an amplitude/phase detector and Persson's RF circuit 1 as teaching an amplitude-modulation amplifier and phase-modulated signal producer. See the outstanding Office action at pages 4-5. Claim 13 requires that the amplitude/phase detector detect respective input signals to the phase-modulated signal producer and the amplitude-modulation amplifier. As shown in FIG. 1, the input signals to Persson's RF circuit 1 are  $r_2$  and  $\phi_2$ . *Signals  $r_2$  and  $\phi_2$  are not detected by the delay controllers 9.* The only input to the delay controllers 9 are error signals from the combining units 10. The delay controllers 9 detect no other signals but the error signals from the combining units 10. Assuming, *arguendo*, that the RF circuit 1 teaches an amplitude-modulation amplifier and phase-modulated signal producer, Persson fails to teach an amplitude/phase detector detecting respective input signals to the amplitude-modulation amplifier and the phase-modulated signal producer. Applicants submit that Persson in view of McCune fails to teach or suggest the claimed amplitude/phase detector. Accordingly, claim 13 is allowable over the cited references.

Claims 14, 16 and 17 depend from allowable claim 13 and, therefore, are also allowable.

Claim 18 depends from allowable claim 13 and, therefore is also allowable. Claim 18 recites, "wherein the timing adjustor is constructed of a digital circuit and varies a clock frequency of this digital circuit to adjust the quantity of delay of the amplitude signal and the quantity of delay of the phase signal." The Examiner asserts that the teaching of varying a clock frequency to adjust the quantity of delay is well known. The Examiner is respectfully reminded that is only proper to take official notice of facts asserted to be well known, without support of documentary evidence, when the facts are capable of instant and unquestionable demonstration as being well-known. It is not appropriate for the Examiner to take official notice of facts

without citing a prior art reference where the facts asserted to be well known are not capable of instant and unquestionable demonstration as being well-known. Assertions of technical facts in the areas of esoteric technology must always be supported by citation to some reference work recognized as standard in the pertinent art. See MPEP § 2144.03.A. In rejecting claim 18, the Examiner asserts that certain facts are well known, which are not capable of *instant* and *unquestionable* demonstration as being well-known. Therefore, the Examiner has not established a *prima facie* case for obviousness, and the rejection should be withdrawn.

Claims 19-22 depend from allowable claim 13 and, therefore, are also allowable.

Claim 24 has been amended and now recites, "multiplying the amplitude signal, which is provided at another input, by the phase-modulated signal to amplitude modulate the phase-modulated signal to produce a transmitting modulated signal; detecting the signal corresponding to the phase that is provided at said input and the amplitude signal that is provided at said another input." The Examiner cites Persson's delay controllers 9 for teaching the claimed step of detecting and Persson's RF circuit 1 as teaching the step of multiplying. See the outstanding Office action at page 8. Claim 24 requires the detection of the amplitude signal, provided at said another input, which is multiplied by the phase-modulated signal to produce a transmitting modulated signal. The only input to the delay controllers 9 are error signals from the combining units 10. Therefore, the delay controllers 9 do not teach or suggest the detection of the amplitude signal which is multiplied by the phase-modulated signal to produce a transmitting modulated signal. Furthermore, Persson's output detector unit 3 monitors the power amplifier output signal (3:22-24). Monitoring a power amplifier output signal does not teach or suggest the detection of the amplitude signal which is multiplied by the phase-modulated signal to produce a transmitting modulated signal. Applicants submit that Persson in view of McCune fails to teach or suggest

the detection of an amplitude signal, provided at said another input, which is multiplied by a phase-modulated signal to produce a transmitting modulated signal. Accordingly, claim 24 is allowable over the cited references.

Claim 23 was rejected under 35 U.S.C. 103(a) as being unpatentable over Persson as modified by McCune in view of Bellaouar. Claim 23 depends from allowable claim 13 and, therefore, is also allowable.

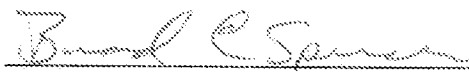
The Examiner objected to claim 15 as being dependent upon a rejected base claim. Claim 15 has been amended and is now in independent form.

Applicants do not acquiesce to any inference or presumption drawn from the Examiner's statements regarding allowable subject matter.

In light of the foregoing, it is respectfully submitted that the present application is in condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. 39576.

Respectfully submitted,  
PEARNE & GORDON, LLP

By:   
Brad C. Spencer, Reg. No. 57076

1801 East 9<sup>th</sup> Street  
Suite 1200  
Cleveland, Ohio 44114-3108  
(216) 579-1700  
Date: August 14, 2007